AMENDMENT TO THE CLAIMS

The status of the claims is:

Claims 1-35: (cancelled)

Claim 36: (currently amended) The ~~system~~ method of claim 4[4]5 wherein information relating to the physical properties of the object~~menu selectable data files in the library database list include connections comprising~~ is at least one of welds, bonds, bolts, sealers, adhesives, pin joints, and ball joints.

Claims 37-40: (cancelled)

Claim 41: (currently amended) The ~~system~~ method of claim 4[4]5 wherein, upon ~~the joint approval of the results of a white body model simulation by the task group, the assembly simulated is fixed as a final design in the library~~completion of all pending task list activities for objects within the assembly, the assembly is approved for commercial release.

Claims 42-43: (cancelled)

Claim 44: (currently amended) The method of claim 45 wherein the user interface comprises a plurality of user interfaces, each user interface accessible by individual users involved with designing, assembling and simulation testing of the assembly, and wherein the pending task list activities for each object within the assembly are maintained and accessible by individual users to make assembly refinements based on the pending task list activities.~~A continuous loop data library for refining the design of a white body model from the beginning of a design process to the end of a design process during the creation of a simulated white body model of a mechanical assembly comprising:a central library database that updates itself with the inclusion of a new record of a simulated mechanical assembly upon the completion of an evaluation of that mechanical assembly, the library including a menu selectable list of data records for parts, CAD data, mesh data, parts connection data, parts assembly data, stock parts data, and assembly evaluation data, all associated with a predetermined assembly; individual sources of simulation model information related to the discrete categories of design, assembly and simulation characteristics of a predetermined white body, the information sources separately~~

accessible to distinct design, assembly and simulation testing groups of an enterprise wherein members of each group are separately associated, respectively, with the design, assembly and simulation functions of the enterprise involved in the development of a mechanical assembly; a plurality of work stations, each work station located at a distance apart from the library database, the work stations interconnected with the library in a spoke network with respect to a central library hub wherein the work stations are uniquely accessible by individual members of separate design, assembly and simulation groups involved, respectively, with the design, assembly and simulation testing responsibilities of the white body model under development;

a menu allowing members of the enterprise design, assembly and simulation testing task groups to select data files related to a predetermined mechanical assembly that is to be evaluated;

the menu accessible at each work station and restricting a task force member's access to the library in accordance with a member's association with one of a design, assembly or simulation group function in the enterprise, the menu having categories comprising: 1) selecting parts and retrieving the data files associated with the selected parts; 2) associating the selected parts and the characteristics of the parts selected with the mechanical assembly to provide a model; 3) selecting a connection for associating parts to be joined with each other from the library; 4) retrieving data files from the library associated with the connection; 5) associating the characteristics of the connection selected with the selected parts; 6) processing the associated connection and parts through a mesh process to provide an assembly mesh; 7) saving data associated with the assembly mesh in a database; 8) building a white body model; 9) translating the model into a data record; 10) performing a virtual simulation of the model comprising one or more of crash impact, durability and noise; 11) recording a data record of the result of the simulation; 12) returning the data record of the model and the result of the virtual simulation of the model to the library; and 13) upon the completion of a virtual simulation of the white body model, replacing any prior record in the library of the mechanical assembly model simulated with a record of the model created and the simulation result of the model processed;

whereby a) successive data files of simulation white body model assemblies evaluated replace previous versions of simulated model assemblies maintained in the library; b) the data files are preserved in a continuous loop sequence as refinements are made to the simulated mechanical assembly model; and c) the data files of the simulated mechanical assembly model are maintained in the library database such that the data files are accessible for subsequent use upon selection by a member of a task group.

Claim 45: (new) A method comprising:

providing an object database comprising a plurality of data files wherein each data file relates to an object that is one of a discrete part and a sub-assembly for incorporation into an assembly, the data file containing information relating to the physical design of the object, information relating to the physical properties of the object, information relating to locations on the object wherein the object may be joined to another object, and available options for joining the object at each location; information relating to the status of the object, information relating to at least one of a current, a previous, and a proposed use of the object, information relating to the simulation of the object within a simulation tool, information relating to a compliance of the object, and information relating to pending activities relating to revision of the object wherein the database is revised after any revisions to the object to reflect the current status of each object after any revisions to the object or information associated with the object;

creating through at least one user interface, the assembly by selection of at least one object from the object database and, where necessary, the user interface allowing for at least one of specification and confirmation of predetermined data of at least one of the location and method of joining the object to another object;

generating a mesh model of the assembly comprising a plurality of mesh parts;

associating material properties relating to the physical properties of the object to each mesh part;

associating material properties relating to a connection of the object and selected method of joining to each mesh part;

storing the mesh model of the assembly into an assembly database together with an associated parts list defining the objects, the selected locations of joining the objects, and the selected methods of joining the objects;

selecting through any user interface a simulation to be performed upon the assembly and establishing parameters relating to the simulation by at least one of user entered data and confirmation of predetermined data;

executing the simulation on the assembly;

storing the result of the simulation in the assembly database with index information relating to the simulation performed and the assembly simulated;

analyzing an aspect of the simulation result against a performance parameter extracted from a compliance database for compliance, the performance parameter being selected in dependence upon at least the assembly and the simulation;

generating a task list of activities pending for the assembly;

updating, based upon the compliance analysis, the compliance data relating to each object within the assembly and adding to the data file for each object in the assembly simulation information relating to at least one of the simulation, the results of the simulation, and the compliance data relating to that object such that the data file has information superseding any previous simulation;

fixing, based on the simulation, imperfections in the mesh;

generating a mesh model, as so fixed, without reference to other parameters of the objects in the assembly that were not fixed; and

updating, based upon the compliance analysis, the compliance data relating to each object within the assembly, preceding a further simulation.

46. (new) The method of claim 45 wherein:

the simulation information includes data concerning at least one of crash impact, durability and noise characteristics of the assembly retrievable through a second user interface.

47. (new) The method of claim 45 wherein:

the object database is accessible by a user through a design user interface wherein the user is granted access to a predetermined portion of the object database in dependence upon an aspect of the user.

48. (new) The method of claim 45 wherein:

the user interface, in allowing for at least one of the specification and method of joining objects, provides user selectable joint options, each joint option relating to a joint selected from the group comprising welds, bonds, sealers, adhesives, pin joints, ball joints, rivets, bolts, and screws.